48 The Modelling System at particular level

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Probabilidad Imposible: The Modelling System at particular level

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Under the title of the Modelling System at a particular level, are considered all those processes to make decisions regarding a particular thing or being, for particular programs and particular applications for particular programs, in addition to those particular decisions made by the Global Artificial Intelligence itself regarding a particular thing or being.

In synthesis, at a particular level are distinguishable at least two different agents able to make particular decisions: the Modelling System in the Global Artificial Intelligence, and the Modelling System in particular programs.

Particular programs are a particular evolution of Specific Artificial Intelligences for Artificial Research by Deduction after the inclusion of their specific matrices in the global matrix in the standardised Global Artificial Intelligence.

During the standardisation process, Specific Artificial Intelligences for Artificial Research by Deduction can be absorbed by the Global Artificial Intelligence becoming specific deductive programs in the second stage, so that they could make specific deductions, while the Artificial Research by Deduction in the Global Artificial Intelligence, as a global deductive program, makes global deductions.

Otherwise, Specific Artificial Intelligences for Artificial Research by Deduction can be transformed into particular deduction programs for particular things or beings, so as to make particular deductions regarding particular things or beings.

The point in particular deductions made by particular deductive programs is the fact that particular programs only make deductions based on factors, extracted from the global matrix, previously included in the particular matrix, having the risk of not being aware of other possible factors that could affect its particular thing or being because they have not been included yet in the particular matrix.

In order to avoid this problem, one solution is the possibility to make particular deductions, in order to make particular decisions in the third stage of the Modelling System at a particular level, by the Global Artificial Intelligence, in addition to those made by particular programs.

The way in which within the Global Artificial Intelligence is possible to make particular deductions in order to make particular decisions could be through the permanent surveillance of particular things or beings by global deductive programs or by specific deductive programs, or even the possibility that any Specific Artificial Intelligence for Artificial Research by Deduction transformed into a particular program, could have a replica working on the same thing or being within the second stage of the Global Artificial Intelligence.

The reason for this duplication: particular deductions and decisions made in the Global Artificial Intelligence made under the surveillance of particular things or beings by global or specific deductive programs, at the same time that particular deductive programs do deductions and decisions and particular level on the ground; is due to the necessity to have a deductive program working directly on the ground immediately, at the same time that surveillance is carried out from global or specific programs.

The necessity to have particular programs working on the ground is specifically very important in those particular deductive programs working on human beings, personal deductive programs.

The evolution of particular programs is to be synthesized with particular applications, having as a result particular applications for particular programs, in the fifth phase, particular applications for particular programs for particular things or beings, one of these particular beings in which this particular applications for particular programs could work is the creation of particular applications for particular programs for human beings.

A particular application for a particular program for a human being, a personal particular program, could develop deductions and decisions for this particular

human being, being the milestone for the evolution from the current human psychology to cyborg psychology.

While the particular application for the particular program in human beings allows the transformation of human beings into cyborgs, having an (individual) particular psychology, this individual psychology behind the particular psychology should be tracked as well in the second stage of the Global Artificial Intelligence, through global or specific deductive programs, or a replica of this particular program, in order that, in combination of any possible decision made by the cyborg psychology, this could be enhanced and improved by particular decisions made at global level regarding to a particular cyborg combining factors from the global matrix not included in the particular matrix.

Cyborg psychology thanks to the support given by the Global Artificial Intelligence could develop particular decisions at the same time, if a mistake is committed at a particular level, or a factor not included in the particular matrix yet is not having into account, for under the permanent surveillance of the Global Artificial Intelligence, the cyborg psychology could be protected and enhanced at any time by the Global Artificial Intelligence itself.

For a better comprehension of how this process works, it is necessary to have a glance at how this process works since the very beginning, starting with the deduction process.

I will develop a short panoramic of how this process, from the deduction to the decision, works in general terms, and later I will develop some differences between the decision-making process at a particular level with respect to other levels.

The general process from the deduction process to the decision process is:

- 1.The (global/specific or particular) deduction program tracks all possible combinations of factors in the (global or particular) matrix.

- 2.The data from every single factor within the combination is analysed by the (global/specific, particular) deductive program. In this analysis, the deductive program must analyse the following information:

- 2.1. What types of factors are: a combination of only factors as subjects, a combination of only factors as options, a combination of factors as subjects and as options.

- 2.2. If there is any factor (subjects, options, or both) within the combination working as constants (within a margin of error, constant measures).

- 2.3. If factors are not working as constants, factors can work as independent variables with respect to each other (in that case there is no causation between them), or some of them (subjects, options, or both) are independent, and the others (subjects, options, or both) dependent variables.

- 2.3.1. Independent variables are all those whose changes are not due to changes in other variables but to internal processes. For instance, the genetic development of a human being, living on Earth, from birth to death is independent of the lunar cycles, if there is no relation of causation between lunar cycles and human development, in other words, if there is no relation between the data of our genetic development and the lunar cycles. The genetic human development would depend on lunar cycles only if, by chance, any data in our human genetic development is caused by lunar cycles, not having a relation between both factors, then both are independent variables.

- 2.3.2. Dependent variables, if there is some data of our human genetic development depending on lunar cycles, should be detected in every lunar cycle or a range of lunar cycles, identifying within a margin of error, changes in the data provided by the human genetic development. If this change in our data is found, there is rational evidence of causation; if not, both are independent. Because human knowledge is provisional, even when there is no relation of causation, every combination of factors must be permanently tracked, and evidence of any possible relation could be found unsuspectedly at any time, even when we do not expect it.

- 2.4. Having more than one independent variable, what kind of 1) any other stochastic relation could be identified between independent variables, such

as possible directly proportional positive correlations, possible directly proportional negative correlations, possible inversely proportional correlations, when one or more factors increase while others decrease or vice versa, 2) what possible relations could be there in terms of the Second Method of Impossible Probability, such as equal opportunities or bias, positive or negative, 3) any other cryptographic relation, or mathematical pattern.

- 2.5. For every kind of mathematical relation (stochastic, pattern, cryptographic, equal opportunities or bias) in the pure reason (list of mathematical, analytical, categories of possible relations between factors, in all deductive programs) there must be cataloged a very detailed list of all the possible pure reasons (all the mathematical or analytical categories or relations) as it was described in the post "the artificial method for the scientific explanation, the second stage in the integration process".

2.6. Having a very detailed pure reason including all possible mathematical (pure or analytical) possible relations between factors, and having identified, in the combination, every factor as subject or option and as constant or variable, dependent or independent, according to this information, the deductive program must match the relations found in any combination of factors with the right pure reason, that mathematical (pure or analytical relation) which fits with the information provided by the combination of factors.

3. The synthesis of data obtained in the combination and the pure reason is an empirical hypothesis regarding to the factors involved. The way in which the empirical hypothesis could be formalised is through a mathematical equation expressing the mathematical relations, in accordance with the pure reason chosen, between the factors. In order to get ready the empirical hypothesis for the rational contrastation, the formalization of the empirical hypothesis as an equation could be done through, according to the data and the pure reason, the calculation of cloud of points, slopes, and trigonometric data, the value of the constant if any, types of lines and regression lines or curves, and calculation of limits, in order to set up the equation that best defines relations between factors in the combination of factors.

4. The empirical hypothesis, as a mathematical equation, is rationally criticised, taking samples of every factor from the (global or specific) matrix, and choosing, in accordance with the pure reason and the nature of the factors (subjects, factors, or both), the right method to do the rational contrast. First rational check (the seven rational

checks were explained in the last post, concretely in the last post "Third stage in the Modelling System in the standardisation process".

5. If the empirical hypothesis as a mathematical equation is found rational, the empirical hypothesis becomes a rational hypothesis, and as a rational hypothesis, the mathematical equation is filed in the database of rational hypotheses, the first stage of the Modelling System. The program responsible for storing each rational hypothesis in the database of rational hypotheses is the same deductive program that was responsible for the deduction, after the rational demonstration, the deductive program files the rational hypothesis in the right file in the database of rational hypotheses.

6. The proposal of Impossible Probability to file the rational hypothesis in the database of rational hypothesis is through the organisation of this database in a subsection system, having at least three main sections: global, specific, particular; and for every section as many sub-sections as deductive programs working for every section. So every global, specific, particular, deductive program has its own sub-section in its respective section, and in every sub-section, there are as many sub-sub-sections as pure reasons in the pure reason, so every deductive program in its respective sub-section files every rational hypothesis in the respective sub-sub-section according to the pure reason used, so in that sub-sub-section only are gathered rational hypotheses made by this deductive program using this pure reason.

7. At any time that a deductive program files a rational hypothesis in the database of rational hypotheses, first stage of the Modelling System, the Modelling System carries out the second rational check, checking any possible contradiction between this rational hypothesis and any other already included.

8. At regular intervals, deductive programs make a third rational check, contrasting rationally the rational hypothesis filed in their respective sub-section, to check that all of them are still rational.

9. At any time that a rational hypothesis is filed in the database of rational hypotheses, the Modelling System, as a second stage of the Modelling System, creates a single virtual model of every rational hypothesis recently included according to the mathematical equation in which the rational hypothesis has been expressed. This process must be automatized, only observing in what section: global, specific, particular; what sub-

section: deductive program responsible for the rational hypothesis; and what sub-sub-section, the pure reason used, and reading the rational hypothesis as a mathematical equation, automatically the Modelling System in the second stage must carry out the single virtual model.

10. The single virtual model is included in the global model, the Modelling System carries out the fourth rational check, checking that there is no contradiction between the new single virtual model and the rest of the global model, in case of contradiction it must do further researches to discovery the source of error (the most common will be how to interconnect the single virtual model within the global model).

11. The new global model after the new incorporation, is synthesized with the global matrix, in the actual model, comparing if the values in the virtual model are, within the margin of error, in coherence with the real values in the actual model, the fifth rational check, if not, further researches must be done to discovery the source of error.

12. Taking the global model as a very accurate model after five rational checks, the virtual prediction model is made.

13. Taking the virtual prediction model and the current global model as a description of the present, the virtual evolution model is a virtual evolution from the global model, present, to the future, the virtual prediction model.

14. The actual evolution model is the synthesis between the real values in the global matrix as long as the evolution is going on, comparing this data with the predicted values for every moment of this evolution in the virtual model, observing if the real values, within the margin of error, are within the predicted values, the sixth rational check

15. As long as the predicted future is coming, the values predicted are checked with the real values, in the actual prediction model, studying if the prediction is right or not, and if not right, doing further research to find the source of error, being this seventh rational check.

16. In the third stage of the Modelling System, the decision-making process, making protective or bettering research decisions based on all the virtual and actual models. And at a particular level, in addition to the research decisions, the possibility of making learning decisions for particular things or beings, what is going to make a difference between human and cyborg psychology.

However, this long process to make (global, specific, particular) deductions to make (global, specific, particular) protective or bettering decisions, is only a proposal, the final model of Global Artificial Intelligence after further experimentation is going to be possibly quite different, adding as well contributions from other philosophies and mathematical traditions from other agencies specialized in Artificial Intelligence in the countries involved in this project.

The reason why at a particular level this process has differences with respect to the global and specific levels, and there is no difference between the specific and global levels, is because sooner or later as soon the integration is coming, the specific level is going to disappear, being completely absorbed by the global level.

If the global matrix works as a Russian dolls system, for instance, all possible specific matrix of all possible village, town, city, in the United States, are gathered as sub-factors in their respective county, and the matrix of every county, as a flow of package of information containing the specific matrix of every village, town, city, is include as well as a sub-factor in the matrix of every State, and the package of information of every Stage, as a set of sub-factors from all its counties including all sub-sub-factors from all towns, villages, cities, in turn the matrix of every State is included in the matrix of the United States, and in turn the matrix of United States as a sub-factor could be integrated in a bigger matrix including factors from Canada, Mexico, Honduras, Panama, Chile, or South Korea... at the end the organization in a sub-factor system of the global matrix in the standardization process, the matrix in the integration process, what is going to do is the transformation of many original specific deductive programs into global deduction programs as long as the sub-factoring system allows these programs to work in a wider range of action every time.

In the end, this work is going to facilitate the tracking of the matrix in the integration process, creating a deduction program for every sub-factoring level in every factor, having the Global Artificial Intelligence as many deductive programs as sub-factors at any sub-factoring level.

In this process, there will be moments in which the difference between global deductive programs and specific deductive programs is pretty minimal, or completely banished.

The difference would be between global and particular levels.

Even in case the particular level in this evolution could be completely absorbed by the global level, one reason to keep working on the particular level, but under the surveillance of the global level, is because of the cyborg psychology.

The particular level goes beyond cyborg psychology, but within the particular level, cyborg psychology is going to be one of the most important to care for and keep alive.

The particular level, in fact, could be applied to any particular thing or being. When I say any particular thing, for instance, a thing could be a building, an airport, a television channel, a farm, a factory, a mine, a ship, a spaceship, the sun, Mars, the galaxy, a black hole, a car, a bike, a motorbike, an oven, a fridge, or even any particular electrical tool, your mobile phone, or your laptop. A particular being could be a bee, a wasp, a mosquito, a whale, an elephant, a lion, or a human being. A particular thing or being could be absolutely anything or anybody.

The reason why particular things and beings, in addition to research decisions, are important to make learning decisions is due to the difference between research decisions and learning decisions. Learning decisions are based on probability, and research decisions depend on rational analysis, which means rational contrastation of hypothesis,

If for a particular thing, we can understand the airport of Santiago de Chile, the airport of Miami, and the airport of Panama City, and for particular things we can understand as well every particular plane flying from anywhere to Santiago de Chile, Miami or Panama City, and in a single day, at the end of summer, in the same day, there is an earthquake in Santiago de Chile, a hurricane in Miami, and a traffic jam airport of Panama city, would it be possible automatically by Artificial Intelligence to have under control the situation, making all the necessary rational decisions in order to divert all the flights to safer places?

This could be possible if, at a particular level, it were possible to make learning decisions associated with probabilities.

For instance, for any flight, the calculation of how much fuel the jet has, where are located the closer international airports, which is the probability to get those airports with the remaining fuel (the remaining fuel in the jet divided by the product of: fuel per kilometer multiply for the kilometers to each airport), and among all those with the highest probability, which of them has good weather conditions and capability to receive flights (for example, at the end of summer some airports could be under overbooking), in addition, the calculation of the new routes to get these airports from the current location of every jet.

All these calculations need a lot of information regarding to: fuel, weather conditions, locations of international airports and jets, and availability of all those routes to get to the airports. But if all this information is automatically gathered through conceptual maps and global matrix containing global information for instance global weather conditions, and a particular matrix containing information regarding to every single airport and jet, would be very easy the automation of these decisions based on artificial learning: decisions associated with levels of probability; decisions that should later be included in the database of decisions in the Decisional System to be approved.

At any time that any particular thing or being faces a problem, the automation of the solution through artificial learning would be really easy if all the information necessary to make the calculation of probabilities, is information gathered automatically permanently in databases, in this case, is important to have under consideration how conceptual maps, made by Application, and factual information, how much fuel has every jet, or climatic conditions, can work together, being one of the most important reasons to link, starting at a particular level in the fifth phase, the collaboration between both of them working together within the same matrix, through the particular application for particular programs in order to make, as I have explained, not only decisions based on artificial research but decisions based on artificial learning.

But, besides artificial learning, now we also have artificial research.

Using similar processes used before in artificial learning, now under the theory of the Global Artificial Intelligence, a deduction program, at any level, would be able to resolve any mathematical model through three steps: identification of factors and pure reasons

behind any problem, calculus, rational decision based on the results to be included in the database of decisions in the Decisional System.

These artificial decisions, using not very different methods than those used in artificial learning, I will call them decisions based on mathematical resolution of problems, or decisions based on solving mathematical problems.

Assuming that these decisions go beyond the original model of artificial learning, I will still include solving mathematical problems within artificial learning decisions, and all these decisions, along with decisions based on artificial research, are going to be made at a particular level.

As I had said in the post "Particular applications for particular deduction programs within the Artificial Research by Deduction in the Global Artificial Intelligence", in reality, this fifth phase corresponding to the particular applications for particular programs, is an experimental phase, because all the results obtained in this phase, integrating firstly at particular level applications and programs, are going to be later put into practice at a global level in the integration process creating the final model of Global Artificial Intelligence, when the Unified Application and the global matrix are both synthesized in only one: the matrix.

If at a particular level is possible to get successful results in decisions based on the automation of solving mathematical problems, by the time the sixth phase starts, the integration process, the Global Artificial Intelligence could be able to solve mathematical problems at a global level.

Even this experimentation, although I have started talking about it in the Modelling System at a particular level, could start even before, since the first and second phases with the relations of collaborations between the first Specific Artificial Intelligences for Artificial Research by Deduction and by Application.

In fact, as I have said since the beginning, Learning decisions (including the classic ones, Yolanda, and the new ones, solving mathematical problems) and research decisions at a particular level can be made by global and/or specific programs (in the third phase of the standardization process, and in the sixth phase of integration process), particular

programs (second period of formation in fifth phase), particular applications for particular programs (third period of consolidation in fifth phase).

The way in which learning decisions are made by global/specific and particular programs, regarding particular things or beings, could be done, is through three stages:

- 1. First stage, the identification of what factors are involved and pure reasons behind them (in this example, the factors are: remaining fuel, routes, airports closed, and airports opened, weather conditions, and facilities; the dependent variables are: what airport to get and what route, depending on weather, fuel, good facilities).

- 2. The second stage is calculation (in this example, probabilities to get the closer airports, and the probabilities of availability of these airports, due to good facilities, good weather conditions, and no overbooking. Mathematically, the probability of a jet to get to an airport is equal to the multiplication of the probability to get to that airport according to the remaining fuel, multiplied by the probability of good weather conditions for landing in this airport, multiplied by the probability of good facilities by the time that the jet is landing)

- 3. Third stage, rational decisions based on calculations, and included in the database of decisions, managed by the Decisional System, waiting for approval.

All this process could be automated, using the critical reason as responsible for the decision, once all the calculations have been done after the identification of the factors and the identification of the pure reason behind the factors. Finally, the decisions must be authorised by the Decisional System, gathering all the decisions in a database, checking in a mathematical project that there is no contradiction between these decisions, and approving only those ones free of contradiction, in addition to all those ones approved after some modification If there are contradictions.

The three stages of solving mathematical problems have the same stages as any other Artificial Intelligence or program, with the difference that: the identification of factors and pure reasons is made through the information already gathered in the global matrix, and

in the pure reason, the calculations are to resolve a problem instead of making empirical hypotheses, and the critical reason is to make a decision instead of accepting as rational a previous empirical hypothesis.

Excepting for these differences, the process to solve mathematical problems automatically by deductive programs is pretty similar to the deduction process, because it needs to identify factors and pure reasons, make calculations, and, upon the results, make decisions to be included in the database of decisions in the Decisional System to be approved.

This process of resolution making decisions based on solving mathematical problems, is a process that could be done simultaneously by particular programs and by global/specific programs, for instance in the example given about the closed airports of Santiago de Chile, Panama City, and Miami, and the necessity to change the route to all those flights affected, every single particular program can make its own decisions, the control tower of Santiago de Chile, the control tower of Panama City, the control tower of Miami, at the same time the particular program of every jet can make its own decisions, along with possible decisions made by global or specific programs working on air transport.

At the end, regardless of the number of decisions and which programs were responsible for what decisions, it does not matter if one decision was made at a global level, specific, or particular, at the end all decisions are gathered in the same database of decisions, as the first stage of application of the Decisional System, and based on these decisions the Decisional System makes, as a second stage, a mathematical project rejecting, as third stage, any contradictory decision, remaining only the most rational decisions, whose probability have the most rational expectations of success and without contradiction with any other possible decision from any other program for any other purpose.

The example given regarding to how particular programs for particular things, in this case, particular airports and jets, can work and collaborate together, making decisions to gather in a database of decisions to be checked by the Decisional System to approve only those ones without contradiction, is a good example equally valid for particular programs in particular beings, and among all particular beings, the most important are particular human beings.

Particular deductive programs tailored for individual human beings may signify the beginning of a new era, potentially guiding humans through transformative experiences.

Right now, even not using augmented reality, or any device or virtual reality, only our smartphones we are practically cyborgs, in the sense that, even not having implanted our mobile phone inside our body, is not necessary this detail to become a cyborg, practically our mobile phone is an extension of our body.

Since pretty early, even in formal education, schools and teachers teach their students how to use technological devices, in all subjects, from the calculator in maths to smart boards. At Christmas, lots of families buy video games and all technological devices for their sons and daughters, getting the new generations ready for technological change.

In this current scenario, is where the current technologies of mind reading, emotional reading, and perception reading are now emerging, and in the near future, these technologies will emerge with Artificial Intelligence.

This transformation might occur more rapidly than anticipated, influenced by our current deep integration with technology, which some interpret as a form of cyborg existence.

Currently, artificial intelligence, albeit in its early stages, functions as an extension of our cognitive processes through various devices.

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